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PERSPECTIVE OPEN

Building capacity to improve respiratory care: the education strategy of the International Primary Care Respiratory Group 2014–2020

This article has been corrected since publication and a corrigendum has also been published

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Significant attention has been given to the global burden of noncommunicable diseases including respiratory diseases and the potential of primary care to address this challenge. The International Primary Care Respiratory Group (IPCRG) has a potentially significant role to build capacity through research and education in a complex global network with varying degrees of capability. In this paper we outline a comprehensive strategy, which revisits the IPCRG's educational role, our aims, audiences and approach in this context. The paper was developed through a collaborative process involving experts in global health, primary care and respiratory education, leading to a consensus educational strategy statement. This is further informed by a review of recent trends in continuing medical education. Professional education and training of health-care workers is a core component of the global response to the challenge of managing respiratory conditions in primary care. This paper offers a revised strategy for building capacity and improving clinical practice in IPCRG member countries by revisiting and broadening our aims, exploring the key audiences, focus and approaches.

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INTRODUCTION

The global burden and prevalence of respiratory disease is well established.^{1,2} In 2013, the World Health Assembly endorsed an action plan for the prevention and control of noncommunicable diseases (NCDs) including a monitoring framework for a 25% relative reduction in mortality from four NCDs—including chronic respiratory disease—by 2025 and a 30% reduction in prevalence of current tobacco smoking.³ In addition, the World Health Organization has recognised that improved access to, and application of, the principles and approaches of primary health care can contribute to the management of this global disease burden.⁴ The high prevalence of asthma, chronic obstructive pulmonary disease (COPD), tobacco dependence and respiratory infections means that primary care needs to be equipped to deal with respiratory diseases and yet there is substantial global variation, investment and development. What, given the right support, could primary care professionals do to address this ever increasing burden of global respiratory disease?⁵

Education can build capacity to improve respiratory care by addressing inequalities and empowering health-care workers to detect, diagnose and support their patients with chronic respiratory disease within their local contexts. A recent survey conducted by the International COPD Network suggests that the global guidelines continue to have limited reach and impact in many regions, and information on the management of COPD patients in primary care is sparse, suggesting a need for 'more

ongoing education and information' for primary care physicians, particularly outside Europe and North America.⁶

A GLOBAL CHALLENGE FOR IPCRG

The International Primary Care Respiratory Group (IPCRG) aims to support primary care professionals to provide better quality respiratory diagnoses, treatment and care. As a network of member countries, our educational strategy has in the past concentrated on endorsing existing cross-national educational products and national programmes relevant to members and the context in which they work.⁷ However, given the strategic development of IPCRG as an international 'community of practice',⁸ reaching further into low and middle-income countries with different primary care systems of variable strengths, our strategy needs to evolve accordingly.

In 2011, the IPCRG launched a flagship educational programme 'E-Quality', which seeks to build educational capability in member and associate member countries. We developed an evidence-based decision-making framework that we use to guide our investment in educational projects (see Box 1). The framework is based on a published scoping exercise and review of literature.⁹ We identified features of educational interventions that are likely to show evidence of effectiveness, although the evidence base, particularly relating to clinical outcomes, is limited. We encourage applicants to anticipate the challenges and barriers they are likely to encounter in local contexts. Applicants from member countries

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Box 1. Decision-making framework for IPCRG E-quality programme⁹

- Clear problem definition in relation to primary and respiratory care, including a justification for the project
- Consideration of the context for change
- An explicit educational or quality-improvement approach
- Measurement of effectiveness of education on clinical practice outcomes
- A consideration of how the intervention complements existing educational practices and culture
- Clarity about how the intervention sits within the wider educational system
- Consideration regarding sustainability
- Identification of a project team, the key stakeholders and collaborative relationships
- The role of information communication technologies (ICT)
- Management arrangements including incentives
- Evaluation

Box 2. E-quality example projects³⁵

- Disseminating online spirometry training and feedback in Australia, based on the *Spirometry 360* train the trainer programme and remote over reading service: University of Washington/Adelaide. This is an example of a blended learning programme for primary care spirometry use and interpretation. An established US programme was introduced in Australian general practice. The programme transferred well but success was limited by the lack of aligned payment incentives
- Assessing the 'Impact of CHAMPS' (Changing Asthma Management Practices), a 1-day training programme on Asthma Diagnosis and Management, on the clinical practice of primary care physicians: The Chest Research Foundation, Pune, India. This project evaluates the impact of an educational programme and measures changes in practice, concerned with prescribing inhaled medicines by GPs who currently prescribe only oral medicines; yet to report
- A Multidisciplinary Educational Programme to develop knowledge and practice for diagnosis and treatment of asthma and COPD: San Bernardo do Campo, Sao Paulo, Brazil. A 'matrix programme' that integrates primary and secondary care, using workshops, joint consultations and multiprofessional 'circle discussions' seeks to improve chronic respiratory practice in family health teams and reduce referrals to secondary care. Knowledge has increased; the next challenge is to ensure sustainability, given the high turnover among family doctors

Box 3. The nature of primary care practice

- Diagnosing, treating, managing (including referring) patients presenting with undifferentiated symptoms sometimes before advanced symptoms and signs described in the international and national respiratory guidelines have developed (IPCRG undertakes mapping to systematically collect and present information on national guidelines used by primary care for the chronic lung conditions commonly found in primary care. (<https://www.theipcr.org/display/ResMapping/Mapping+of+national+guidelines+used+by+primary+care>))
- Practising in a low-tech environment, often without the sophisticated investigations and treatment modalities of secondary care, where the goal is to take a good history and 'rule out' conditions especially those requiring acute action or referral
- This is of particular importance in many low and middle-income countries where the few pulmonary specialists tend to be concentrated in academic centres, which may be difficult to access. The cost expended to seek and undergo specialist evaluation may be difficult to justify, and treatments recommended by a specialist may not be readily or at all available
- Not all systems have a clear distinction between primary and secondary care. For example, in Asia Pacific specialist doctors may work in primary care practice in the evening on a pay per visit basis and in some countries primary care is still episodic and market driven
- Using generalist expertise to manage people with multimorbidity as opposed to treating single diseases
- Seeing patients in the context of their families, homes and communities

present and discuss their ideas with an expert panel as part of the selection process. IPCRG offers support, mentoring and small-scale ('seed') funding; working with successful bidding teams to build confidence; ensuring delivery of projects; and sharing learning (see Box 2).

Our objective now is to build on and extend E-Quality and to develop a more comprehensive strategy, which revisits the IPCRG's educational role, our aims, audiences and approach in the context of our investment capability and the increasing global attention to the challenges of NCDs. These highlight the need to strengthen primary health-care capacity if we are to achieve the World Health Organization monitoring framework targets.³

BUILDING CAPACITY TO IMPROVE RESPIRATORY CARE**Our aims**

The strategy outlined in this paper supports the longstanding goals of IPCRG. We seek to improve clinical practice, with attention to the needs of patients and clinicians, the nature of primary care

practice (see Box 3) and with a particular focus on respiratory medicine. Our membership includes low, middle and high-income countries with wide variations in capacity and capability. We recognise that the primary care respiratory leaders from our member countries hold significant expertise in education.^{10,11} There are established regional organisations^{12,13} and international programmes that address respiratory education in low and middle-income countries;^{14–16} however, these are not created or led by primary care peers, and this we believe diminishes their appropriateness and value for implementation in primary care settings.

As a global network, IPCRG can best add value by:

- (1) stimulating debate on the most effective educational methods and evaluation
- (2) building capacity and capability—nationally or regionally—by testing locally acceptable programmes
- (3) sharing best practice in primary care and practical experience of respiratory programmes

Box 4. IPCRG education strategy: next steps

- We will continue to support E-Quality as a flagship programme supporting the development of 'bottom up' educational or pilot projects in member countries³⁵
- We will design a 'teach the teacher' programme template. This programme will be tailored to national or regional programmes and include identification of a work-based educational project (including pre and post course work) that then provides the material for the programme. Opportunities exist to test this template with IPCRG leading the programme in collaboration with local leaders in respiratory care (a 'teaching faculty') and providing the core content
- We anticipate that 'teach the teacher' programmes will enable us to identify and develop a network of respiratory leaders, thus building strategic capability in member countries
- We plan to explore the potential to develop a respiratory distance-learning module for primary health-care professionals—in partnership with higher education institutions
- Where educational programmes exist within member countries, we will adapt our current 'endorsement policy' and offer an 'education peer review' service, based on clear criteria and with a team of education reviewers. The main difference from our current endorsement policy is that it would not be essential that IPCRG be involved in the programme development as long as it met the specified criteria
- We will help endorsed programmes to apply for formal accreditation
- We will share best practice, narratives and case studies using the IPCRG web platform³⁶
- We will consider what IPCRG's role might be in disseminating information from the npjPrimary Care Respiratory Medicine to primary care colleagues who do not currently read it or have access to it. Potentially, this might be digests in translation and/or news and features adapted for local member use
- We see advantages in exploring technology as a way to capture the key messages and teaching methods to reach wide audiences with short illustrative films that could be relabelled and used for different audiences

(4) evaluating the results of our efforts using improvement science methods

We want to promote rigorous thinking about the way that local educational programmes are implemented and evaluated. We have a role in addressing gaps in specialised respiratory education and enabling translation to primary care. We can build capability by advocating and joining up existing programmes and leading 'teach the teacher' programmes with a primary care respiratory focus. We see potential in developing a cadre/network of global respiratory leaders, equipped with the experience, approach and competence to cope with the complex challenges such as raising quality standards, lobbying, networking and developing national programmes.

Who are our audiences and collaborators?

Given the varied nature of health-care policy, primary care provision and practice across our membership, we recognise a range of audiences and collaborators. We propose four target groups:

1. Clinicians and health-care workers in primary care—working with particular challenges (see Box 3). Respiratory disease is a specialised area of practice not always addressed in existing primary care educational programmes, and in some low-income countries COPD is not a condition recognised within the medical curriculum.
2. Academic workforce—those delivering undergraduate and postgraduate teaching; this links to our proposal to build capacity and capability in member countries. There is potential here to work in partnership with locally established organisations.¹⁷
3. Experts—in specific clinical areas (asthma, rhinitis, COPD, tobacco dependence and respiratory infections) or in particular skills of respiratory care (for example, spirometry and inhaler technique). There is strong potential here to share good practice and to join up existing programmes. Experts are important collaborators who can contribute by taking a consultancy role, sharing their knowledge and supporting the testing and careful adaptation of their intellectual property to different settings.
4. Potential leaders—who may have a more strategic role and may not be primary care clinicians. For example, public health

or health policy/government officials/politicians and managers may be respiratory leaders.

We anticipate that these categories overlap and people may adopt more than one role depending on the task. This applies to low, middle and high-income countries, although we anticipate that the focus will vary between countries: some needing support in establishing basic respiratory knowledge, or 'righting' poor practice such as high levels of antibiotic prescribing for uncomplicated viral respiratory tract infections; others in developing expertise, or promoting a strategic respiratory policy.

How can IPCRG support learning and build capacity?

IPCRG is not primarily an education provider, although we may on occasion lead educational programmes. We might equally 'signpost' member countries to appropriate educational provision or facilitate/broker collaborations between member countries concerning educational initiatives. The balance of provision and signposting will depend on the audience.

We recognise that continuing medical education has traditionally focused on 'knowledge transfer' but is evolving towards a more complex construct that addresses adult learning principles (how and when professionals learn); and the complexity of health systems in which learning and practice take place.¹⁸ In addition, the idea that high-income 'developed' countries teach other 'less developed' countries has also been challenged: everyone has something to learn and everyone has something to teach.^{19,20} Given our aims and the varied audiences identified so far in this paper, we will broaden our scope to support learning and build capacity through:

1. Teaching clinical practice—this might be based on a particular theme, e.g., born out of IPCRG research or discrete projects such as focusing on 'difficult-to-manage' asthma rather than severe asthma.²¹
2. Developing teaching capacity in primary care—which includes understanding adult learning principles, assessing learning needs, setting learning and teaching objectives, learning design, methods and assessment such as the approach taken by WONCA in schemes in Macedonia.²²
3. Stimulating discussion about effective educational methods and evaluation. Moving beyond education to consider approaches to quality and service improvement; measurement

- of practice; understanding and working in health systems with 'context appropriate interventions'.^{23,24}
4. Promoting leadership—capacity building through mentoring and coaching; self-awareness, building confidence, presentation skills, facilitating and influencing skills, project management.^{25,26}

Which educational interventions are appropriate—and what is the evidence base?

In a review of the literature underpinning our E-Quality programme we stated that 'educational interventions sit within complex health-care, economic and policy contexts and evaluations that seek to test specific approaches to education show equivocal results'.⁹ There is some evidence that carefully designed, multifaceted educational programmes that engage health professionals in their learning, provided ongoing support, are sensitive to local circumstances and delivered in combination with other quality-improvement strategies or incentives, are most effective'.⁹ These principles also reflect patient behaviour change literature.²⁷ We thus anticipate that educational programmes supported or endorsed by IPCRG will be multifaceted (or 'blended') and will seek to demonstrate positive outcomes in both professional practice and patient outcomes. Outcomes could be increased knowledge leading to changes in clinical practice, patient outcomes or system-wide impacts (see Box 2).

We have identified a number of trends in the field of health-care education that require further attention, given the varied geographical, cultural and resource differences of IPCRG member countries. For example, distance and online learning is an area of rapid development supported by advances in technology and access. A 'new cycle of technology' includes increased use of mobile devices (tablets/mobile phones) and web 2.0 technologies (wikis, podcasts and other social media) that have the potential to contribute to collaborative practice and education in health care.^{28,29} Examples include e-learning packages offered by the European Respiratory Society or accredited distance learning programmes in Global Health and NCDs at the University of Edinburgh.^{15,30} The ways that consumers use technology are also changing, with a growth in watching video online and live streaming.³¹ Given that IPCRG's membership reaches a global primary care audience of 125,000,³² this opens up possibilities for engaging large (IPCRG) audiences in new ways.

It has been suggested that Massive Open Online Courses, available through portals such as NextGenU,³³ may be a 'game changer' in medical education—allowing unprecedented access to online content and academic communities. However, critics highlight issues such as lack of context or cultural relevance, quality assurance, low interactivity and difficulty in assessing learning and changes in practice.³⁴ These are important considerations if IPCRG has a role in developing online materials that fill gaps in local provision, and in contributing to research and evaluation of online and distance education.

CONCLUSIONS

Professional education and the training of health-care workers is a core component of the global response to the challenge of managing respiratory conditions in primary care. IPCRG has a potentially significant role in a complex global network, which has varying degrees of capacity and capability. In recent years our primary focus has been on developing research, but increasingly we are aware of the need to revisit our role in supporting education and the dissemination of research and of educational training skills. This paper offers a revised strategy (see Box 4) for building capacity to improve clinical practice in IPCRG member

countries by revisiting and broadening our aims, exploring the key audiences, focus and approaches.

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CONTRIBUTIONS

SW, JCDs and JM designed a collaborative event to discuss an education strategy for IPCRG. All the authors took part in the event in Porto January 2014. Subsequently, SW and JM wrote the first draft of the paper, to which all the authors contributed.

COMPETING INTERESTS

JCDs and HP are Associate Editors of *npj Primary Care Respiratory Medicine*, but were not involved in the editorial review of, nor the decision to publish, this article. The remaining authors declare no conflicts of interest.

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